

SECTION 10 75 00
ALUMINUM FLAGPOLE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Requirements for three flagpole systems including but not limited to:
 - 1. Ground set flagpoles made from aluminum.
 - 2. Fittings, base, anchorage.
 - 3. Finials.
 - 4. Flags.

1.2 SUBMITTALS

- A. Product Data: Technical data for flagpoles including construction details, material descriptions, dimensions of individual components and profiles, operating characteristics, fittings, accessories, and finishes for flagpoles.
- B. Shop Drawings: Submit plans, elevations, and attachment details. Show general arrangement, jointing, fittings, accessories, grounding, anchoring, and support, including section, and details of foundation system.
- C. Delegated Design Submittal:

1.3 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: Submit data to include in operation and maintenance manuals.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain flagpoles as complete units, including fittings, accessories, bases, and anchorage devices, from single source from single manufacturer.

1.5 COORDINATION

- A. Coordinate installation of anchorages for flagpoles. Furnish setting drawings, templates, and directions for installing anchorages that are to be embedded in concrete or masonry. Deliver items to project site in time for installation.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Spiral wrap flagpoles with heavy paper and enclose in a hard fiber tube or other protective container.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Engage a qualified professional engineer, licensed in the State in which the project is located experience in the design of flagpole systems using performance requirements and design criteria indicated.
- B. Seismic Performance: Flagpole assemblies shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.
- C. Structural Performance: Flagpole assemblies, including anchorages and supports, shall withstand design loads indicated within limits and under conditions indicated.
 - 1. Wind Loads: Determine according to NAAMM FP 1001. Basic wind speed for Project location is as indicated on the Drawings.
 - 2. Base flagpole design on polyester flags of maximum standard size suitable for use with flagpole or flag size indicated, whichever is more stringent.
- D. Accessibility Requirements: Comply with applicable requirements.
 - 1. U.S. Architectural and Transportation Barriers Compliance Board Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG) 2010.
 - 2. ICC/ANSI A117.1 Accessible and Useable Building and Facilities.

2.2 FLAGPOLES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Acme/Lingo Flagpoles, LLC.
 - 2. American Flagpole.
 - 3. Baartol Company.
 - 4. Carrot-Top Industries, Inc.
 - 5. Eder Flag Manufacturing Company, Inc.
 - 6. Ewing Flagpoles.
 - 7. Morgan-Francis Flagpoles and Accessories.
 - 8. Pole-Tech Company Inc.
 - 9. U.S. Flag & Flagpole Supply, LP.
- B. Aluminum Flagpoles: Cone tapered flagpoles fabricated from seamless extruded tubing complying with ASTM B 241/B 241M, Alloy 6063, with a minimum wall thickness of 3/16 inch (4.8 mm).
- C. Exposed Height: 30 feet (9 m) 35 feet (11 m) and 40 feet (12 m).
 - 1. Type 1 Flagpole: 30 feet for Owner's flag.
 - 2. Type 2 Flagpole: 35 feet for State flag.
 - 3. Type 3 Flagpole: United States flag.

- D. Construct flagpoles in one piece..
- E. Metal Foundation Tube: Corrugated steel foundation tube, 0.060 inch (1.52 mm) wall thickness with 3/16 inch (4.8 mm) steel bottom plate and support plate; 3/4 inch (19 mm) diameter, steel ground spike; and steel centering wedges welded together. Galvanize foundation tube after assembly. Furnish loose hardwood wedges at top of foundation tube for plumbing pole.
 - 1. Flashing Collar: Same material and finish as flagpole.

2.3 FITTINGS

- A. Finial Ball: Flush seam ball, sized to match flagpole butt diameter for Type 1 and Type 2 Flagpoles.
 - 1. 6 inch diameter spun aluminum, finished to match flagpole.
- B. Finial Eagle: Sized for Type 3 flagpole.
 - 1. Provide E-16 Gold colored eagle with 3 inch finial ball for top of 40 foot Type 2 flagpole.
 - 2. Cast aluminum with polished brass finish.
 - 3. 20 oz. (0.70 mm) copper with 23 karat, gold leaf finish.
- C. Internal Halyard, Cam Cleat System: 5/16 inch (8 mm) diameter, braided polypropylene halyard; cam cleat; and concealed revolving truck assembly with plastic coated counterweight and sling. Furnish flush access door secured with cylinder lock. Finish truck assembly to match flagpole.
 - 1. Halyard Flag Snaps: Stainless steel swivel snap hooks with neoprene or vinyl covers. Furnish two per halyard.

2.4 MISCELLANEOUS MATERIALS

- A. Flag: United States flag: Size: As indicated on the Drawings.
- B. Flag: Owner's Flag: Size: As indicated on the Drawings.
- C. Flag: State Flag: Size: As indicated on the Drawings.
- D. Concrete: Quick set concrete composed of not less than five (5) sacks of Portland cement conforming to ASTM C150, per cubic yard of wet concrete combined with fine aggregate, clean water, and mixed in proportions to attain minimum 28 day compressive strength of not less than 3,000 psi.
- E. Nonshrink, Nonmetallic Grout: Factory packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107/C 1107M.
- F. Drainage Material: Crushed stone, or crushed or uncrushed gravel; coarse aggregate.
- G. Sand: ASTM C 33/C 33M, fine aggregate.

- H. Elastomeric Joint Sealant: Single component neutral curing silicone joint sealant complying with requirements in Section 07 92 00.
- I. Bituminous Paint: Cold applied asphalt emulsion complying with ASTM D 1187/D 1187M.

2.5 FINISH

- A. Aluminum:
 - 1. Clear Anodic Finish: AAMA 611, AA-M12C22A41.
 - 2. Gold Anodic Finish: AAMA 611, AA-M32C22A43; gold color.
- B. Stainless Steel Finish:
 - 1. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.
 - 2. Polished Finishes: Grind and polish surfaces to produce uniform finish, free of cross scratches.
 - a. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
 - b. Directional Satin Finish: No. 4.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of the work.
- B. Proceed with installation after correcting unsatisfactory conditions.

3.2 PREPARATION

- A. Prepare uncoated metal flagpoles that are set in foundation tubes by painting below grade portions with a heavy coat of bituminous paint.
- B. Foundation Excavation: Excavate to neat clean lines in undisturbed soil. Remove loose soil and foreign matter from excavation and moisten earth before placing concrete. Place and compact drainage material at excavation bottom.
- C. Provide forms where required due to unstable soil conditions and for perimeter of flagpole base at grade. Secure and brace forms to prevent displacement during concreting.
- D. Foundation Tube: Place foundation tube, center, and brace to prevent displacement during concreting. Place concrete. Plumb and level foundation tube and allow concrete to cure.

- E. Sleeves: Locate and secure sleeves in forms by bracing to reinforcement and forms.
- F. Anchor Bolts: Locate and secure anchor bolts in forms with templates and by tying to reinforcement.
- G. Concrete: Place concrete as specified in Section 03 30 00. Compact concrete in place by using vibrators. Moist cure exposed concrete for no fewer than seven days or use nonstaining curing compound.
- H. Trowel exposed concrete surfaces to a smooth, dense finish, free of trowel marks, and uniform in texture and appearance. Provide positive slope for water runoff to perimeter of concrete base.

3.3 INSTALLATION

- A. Install flagpoles where indicated and according to Shop Drawings and manufacturer's written instructions.
- B. Foundation Tube: Place flagpole in tube, seated on bottom plate between steel centering wedges, and install hardwood wedges to secure flagpole in place. Place and compact sand in foundation tube and remove hardwood wedges. Seal top of foundation tube with a 2 inch (50 mm) layer of elastomeric joint sealant and cover with flashing collar.
- C. Baseplate: Cast anchor bolts in concrete foundation. Install baseplate on washers placed over leveling nuts on anchor bolts and adjust until flagpole is plumb. After flagpole is plumb, tighten retaining nuts and fill space under baseplate solidly with nonshrink, nonmetallic grout. Finish exposed grout surfaces smooth and slope 45 degrees away from edges of baseplate.
- D. Provide positive lightning ground.

3.4 CLEANING AND ADJUSTING

- A. Clean area of debris and place excavated soil where directed or remove from site as directed. Clean flagpole of dirt and foreign matter which will affect appearance.
- B. Touch up damage to finished surfaces with manufacturer's matching paint.
- C. Adjust fittings for smooth operation.

END OF SECTION

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